difficult nor subject to error if the criteria outlined by Pitts and others are followed rigorously. Nevertheless, recovery has been alleged to occur in patients who were thought to be brain dead but, in fact, were not. A review of such cases shows that in each instance the clinical criteria were not satisfied. We do not know of a single, medically reported case in which the criteria of brain death were met and yet the patient survived.

The validity of the clinical criteria for brain death has been confirmed in two ways: first, by determining the outcome in patients whose ventilatory support was continued after brain death had been diagnosed, and, second, by analyzing the early clinical features of patients who have survived a period of deep coma (not induced by sedative drugs) to find out whether any of them might have been mistakenly diagnosed as brain dead. The consequences of continued ventilatory support in brain dead subjects have been established. The largest series is that of Jennett and co-workers[2] in which 326 patients with brain death from head injuries received continued support, yet all suffered cardiac arrest within hours to days after the diagnosis.

In our series of 500 patients in coma not due to trauma or drug intoxication, there were 121 survivors one month after the onset of coma.[3] None of these survivors, even in their worst state, would ever have been diagnosed as brain dead. Jennett and colleagues reached the same conclusion after analyzing the clinical data from more than 1,000 survivors of severe head trauma.[2]

It is our view based on the foregoing data that the clinical criteria are reliable so that, when properly applied, they will never lead to the diagnosis of death in a patient who might survive. Nevertheless, the diagnosis of brain death carries a heavy responsibility and some medical centers have found it useful to use supplementary tests, such as electroencephalography, to provide verifiable support to the clinical evaluation. We believe that instruments can never replace the thoughtfulness, experience and thoroughness of a capable physician as a guarantor of the accuracy of a diagnosis of brain death. Therefore, we believe each hospital should designate several experienced and appropriately trained physicians who would be responsible for establishing and certifying the presence of brain death.

Failure to establish hospital guidelines and procedures inevitably makes a diagnosis of brain death "extraordinary," as documented in the report of Tyler and Robertson. The lack of impact of brain death legislation on medical practice, which they reported, also reflects the fact that in most states, even in those with brain death statutes, brain death remains a permissible rather than a mandatory definition of death. In view of the overwhelming evidence that physicians can now recognize brain death within a few hours of brain injury, we believe that it is unethical to indefinitely support patients who have complete and unrecoverable brain damage. A greater appreciation by physicians and by society at large of the logical consequences of diagnosing brain death would prevent unnecessary therapeutic and diagnostic procedures and would increase the number of viable organs available for donation.

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REFERENCES

1. Plum F, Posner JB: Brain death, chap 6, The Diagnosis of Stupor and Coma, 3rd Ed. Philadelphia, FA Davis, 1980, pp 313-324
2. Jennett B, Gleave J, Wilson P: Brain death in three neurosurgical units. Br Med J 1981 Feb; 282:533-539
3. Levy DE, Bates D, Caronna JJ, et al: Prognosis in nontraumatic coma. Ann Intern Med 1981; 94:293-301

Of Third Parties and Patient Care

IT IS NO SECRET that America now has the finest and best medical care the world has ever seen. It is also no secret that its expense has become a problem for all concerned. Those who must pay the ever-increasing costs have rebelled, and are demanding that these costs be controlled or even reduced. It is significant that those who are making these demands are not those who provide or receive the care, and indeed sometimes they do not seem overly concerned with what effects cost reductions might have upon the availability of needed care or services. They are third parties, somewhat remote from the human and professional aspects of medical care—that is, doctors, patients and the human and professional interactions that take place between them. For this reason, their interventions, aimed primarily at reducing costs, often seem out of touch or insensitive to what health care is all about and indeed more than once these interventions have wreaked havoc in our health care system. How did all of this happen and what, if anything, can physicians do about it?

The health care costs that are now deemed to be unacceptable have been rising and rising for some time. The reason is success—the medical profession's success in developing and applying unprecedented advances in medical science, and society's success in making substantial progress in applying the social principle of equal access to mainstream health care for all. These successes include new services and technology that have become available (coronary care units and coronary bypass operations are examples); a greater number of people living to more advanced ages who require more care (which has now threatened the fiscal solvency of the Medicare program); a substantial increase in the number of physicians and other health professionals (mandated by society to make possible more health care for more people); a massive involvement by third parties, both public and private, in financing the delivery of health care, which in turn has spawned much costly legislative, regulatory, administrative and judicial rules and laws—and this is not to mention the great number of expensive tort and other court actions that have been brought against doctors and others in the health care system in recent years. All of this has had the effect of bringing yet other kinds of third parties

into the health care equation. And most recently, and paradoxically in the name of cost containment, profit making from health care has been blessed as a good thing, as has open competition and costly marketing of health care services. Altogether it is little wonder that health care costs have been rising.

It is more than obvious that these are times of increasing third party involvement and dominance in health care, and that the number and kinds of these third parties are expanding in both the public and private sectors. One may recall that third parties are called third parties because they are outside the two party doctor-patient interaction that is the essence of patient care, and yet in one way or another they impinge upon it. Third parties to health care are to be found in business, industry, labor, the legal profession, legislative bodies, government bureaucracies and even the courts. But the emphasis of most of them is on dollars, the dollars to be saved or earned in health care. Health care is beginning to be regarded by many of them as an inert commodity to be bought, sold, bartered or exploited for economic gain. While this array of third parties is indeed formidable it remains a fact that they are all peripheral to the central action in health care and often are relatively insensitive to what is going on there and to what is needed. They seem often to pay relatively little heed to how physicians must work, caring for persons who are ill, injured or emotionally disturbed, or to what occurs in the very personal interactions in patient care. The health care "commodity," if indeed it is that, is a living, personal and very human affair whose humanity will have to be recognized as much as its costly technology if we are to continue to have the finest and best medical care in the world.

What can physicians and the medical profession do? Somehow we must see to it that the world's best medical care does survive and continue to prevail in what sometimes seems like an almost insane health care environment. It would seem that the key to what physicians and the profession should do lies in expanding and promoting the concept of the doctor-patient relationship. Physicians have always been concerned with what is best for their patients and collectively the medical profession has always been concerned with what is best for the public health. What is needed now is for physicians to become active and recognized advocates and ombudsmen for their patients in the individual health care situations and for the profession to be the recognized advocate and ombudsman for all patients and for all health care in the broader social, economic and political arenas of society as a whole. Someone must take care of patients' interests and speak out authoritatively in their behalf. Third parties are inherently not able to do this. To the extent individual physicians and the profession do so they will be fulfilling an ancient professional responsibility. To the extent their advocacy is successful and recognized by all concerned, they may expect patients and the public to respond, and in turn speak out and give needed support to physicians and to the profession in what for some time is likely to be an increasingly hostile environment for health care.

When the dust finally settles, and if our goal has been accomplished successfully, the physician-patient relationship should have achieved its finest hour, and Americans should still have the best health care in the world.

MSMW

Cardiomyopathy in Diabetic Patients

IT IS estimated that more than 4 million Americans have coronary artery disease and about 20% of these have associated hyperglycemia (or diabetes). Heart disease is the leading cause of death in the United States, with more than 700,000 deaths each year and 75% of these being due to ischemia. Approximately 5 million Americans have known diabetes and it is estimated that it may be undiagnosed or may eventually develop in another 5 million. Although diabetes is officially ranked by the National Center for Health Statistics as the seventh leading cause of death in the United States, the National Commission on Diabetes has considered diabetes and its complications as the third leading fatal disease category.[1]

Elsewhere in this issue Kereiakes and associates present an excellent review of heart disease in diabetic patients, incorporating much new information. They emphasize the significance of coronary artery disease in the diabetic population and discuss other topics including insulin and myocardial metabolism, diabetic cardiomyopathy and autonomic dysfunction.

Extramural atherosclerotic coronary artery disease has become the most important single cause of death among patients with diabetes and contributes significantly to the morbidity associated with diabetes. Nevertheless, during the past decade there has emerged an increasing amount of epidemiologic, clinical and experimental evidence that supports the concept that a specific cardiomyopathy in diabetic patients causes congestive heart failure.

In the Framingham study the incidence of congestive heart failure among diabetic patients was higher than among nondiabetic cohorts.[2] This excessive risk appeared to be independent of atherogenic coronary artery disease and hypertension, suggesting that some form of cardiomyopathy is associated with diabetes.

Johnson and colleagues,[3] however, believe that the great majority of diabetic patients with heart failure have what they term the cardiomyopathic syndrome due to coronary artery disease with multiple areas of infarction, whether or not clinical clues to the presence of coronary artery disease exist. They consider that the existence of a unique cardiomyopathy of diabetes—one that is unrelated to coronary artery disease—is unproved.

Also to be considered as a possible cause of cardiomyopathy in diabetic patients is the occurrence coin-